THE CLASSICAL THEORY OF INTERNATIONAL TRADE IN THE LIGHT OF THE ASSUMPTIONS OF IMPERFECT COMPETITION

BY

DONALD BAILEY MARSH

B.A., University of New Brunswick, 1935

M.A., Louisiana State University, 1936

AN ABSTRACT OF A THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN ECONOMICS IN THE GRADUATE SCHOOL OF THE UNIVERSITY OF ILLINOIS, 1940

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1. The theory of international trade under conditions of imperfect competition enjoys at best a shadowy existence, largely in the concessions and qualifications of theorists who retain perfect domestic competition as their normal case. The present study begins with the theory of international trade as traditionally formulated, and works toward a re-definition of the scope of that theory consistent with assumed conditions of imperfect domestic competition. *Differentia* basic to the classical theory are retained so far as possible in the modified definition of scope. An attempt is made, finally, to fill the forms developed in the study with at least a hypothetical content, and some theoretical problems are considered. The conclusions contain implications for tariff policy which are examined briefly at the end.

2. Because the scope of the classical theory of international trade is so intimately connected with the mobility premise, a consideration of this premise is central to Part I. Other premises of classical economic theory find a place in providing the conditions prerequisite to the kind of mobility supposed to exist within the trading unit, or country, engaging in international trade. The trading unit, or country, is itself defined, in keeping with classical usage, as an economic entity within which perfect mobility exists. And the theory of international trade then becomes the theory of exchange between these units of perfect mobility.

The pure theory of international trade with perfect domestic competition, stated in its simplest terms, has been defined in this thesis as the theory which "deals with the exchange of two homogeneous indefinitely divisible commodities between two (spatially) distinct markets, each of which is perfect—*i.e.*, among other things, without spatial extension." But further development takes account of certain specialized assumptions appropriate to a particular case which gives complete validity to the doctrine of comparative costs. Special attention is directed here to the assumption of barter exchange determined by relative labor costs. Various qualifications necessary to bring the doctrine to the general level of abstraction maintained in the classical theory of international trade, as at first defined, are considered. Finally, the relevance of this doctrine under the more realistic conditions contemplated by the general case is

assessed and the difficulties attending that doctrine, even under conditions of perfect competition, are set forth.

3. In Part II, an attempt is made to develop an alternative definition of the scope of the theory of international trade when domestic competition is assumed to be imperfect. In this connection, the main consideration is the effect on the theory of the existence of imperfect mobility within the "trading body" or nation. This derives for the most part from the absence of one of the conditions of mobility assumed by the classical theory; *viz.*, what Edgeworth called "indefinite multiplicity and dividedness." The treatment at the beginning is purely negative, and deals with certain anomalous situations which present themselves when one tries to include indivisibility (leading to variable returns) within the framework of classical theory.

A great deal of the material used in this Part may be found in journal articles concerning the laws of return, and an extended reference is made as well to Professor Graham's argument for a tariff designed to realize potential economies of scale. The difficulties arising from the existence of non-competing groups are reviewed in the light of general considerations regarding indivisibility, and the consequent obstacles to perfect mobility within the domestic economy.

4. Conditions excluded by the competitive analysis are presumably included in a theory of imperfect competition. However, this is to define the scope of the theory of imperfect competition too broadly. Imperfections due to short-run frictions must be excluded, since we are not dealing with short-run problems. Economically irreducible impediments to mobility must be excluded. The argument of the thesis has attempted to show that these are characteristic of monopoly based upon "natural scarcity" or government franchise, or that we have the conditions contemplated by the theory of international trade. In either case, the theory of imperfect competition contributes little except to add some new terminology, and, in the theory of duopoly, to point the obvious moral that if one states the problem differently one gets a different result. The type of immobility which exists under conditions of imperfect competition in the domestic economy arises from the existence of costs of entry into the industries concerned. Entry into the industry is free in the same sense that it is not free internationally, or under conditions of "quasi-international trade" ("natural" monopoly, etc.). In other words, under conditions of

imperfect competition, no impediment need exist which is basically non-economic, and which must therefore be regarded as given and irreducible so far as our theory is concerned. Freedom of entry exists under conditions of imperfect competition, in the domestic economy, but it is freedom *at a price.*

5. Part III begins with the consideration of international trade as a case of bi-lateral monopoly. The argument here is indebted to Paul A. Samuelson's contributions concerning the measurement of alleged "gains of trade." Although trade under conditions of perfect competition produces unique terms of trade, the terms of trade where nations "act like monopolists" are indeterminate between the points of indifference on an Edgeworthian contract curve. Further, the fact that the later classical writers did not claim more than a *presumption* in favor of free trade is understandable when it is shown that the terms of trade under conditions of perfect competition, while determinate, can never be demonstrated to be the optimum. The same applies of course to trade under conditions of bi-lateral monopoly, and determinateness disappears as well.

6. A promising technique for the analysis of international trade under conditions of imperfect competion is that already applied to duopoly in the domestic market. The theory of duopoly may be extended to international trade with especial advantage where a disparity of costs exists between the producers in the respective countries engaging in trade. Unequal costs must disappear except where freedom of entry is non-existent or restricted. Where such disparity is "permanent," we have the conditions ordinarily associated with international trade. The terms of trade in this case must depend upon what assumptions we make concerning the behavior of the competing producers. One of the more likely sets of assumptions has already been applied by Thorkil Kristensen to a (presumably) domestic market. The producer with the lower marginal costs becomes price-leader, while the other firm becomes a competitor-follower. "Back-to-back" diagrams have been used in this thesis to illustrate the principles determining price as well as the quantity of imports and exports under conditions of imperfect domestic competition. Incidentally, the price-leader approach makes possible a determinate solution of a problem considered indeterminate by O. J. McDiarmid; *viz.*, that of two producers competing in a third market under conditions of imperfect competition. Under the assumptions accepted here, it is not

necessary to posit an equality of marginal cost and marginal revenue for *both* firms.

7. The more intricate market situations may be regarded as modifications of the fundamental form, duopoly. Thus, the admission of more producers on each side need not change the theory, provided we are able to posit the same things concerning their behavior patterns. On the other hand, if the domestic market becomes imperfect, we have to take account of product differentiation. Here competition may take the form of price adjustment or quantity adjustment; while in a perfect market producers can make a quantity adjustment only, since no price differentiation is possible.

We note two considerations which have appeared in the thesis. In the first place, product differentiation occurs in effect when a disparity of costs exists due to international impediments to the mobility of factors, since these costs can never be equalized by competition, and the low-cost producer can force his competitor out of the market by cutting his price: just as the producer of any substitute can be forced out of the market by the adoption of a price-cutting policy by the producer of the "preferred" commodity. Both disparate costs and "preferred" products are relevant to a theory of imperfect domestic competition, but it is only under conditions of international trade (or of "quasi-international trade") that we can assume the *permanent* existence of either.

In the second place, impediments to the movement of goods (tariffs, transport costs, etc.) may result in "quality discrimination" as well as "price discrimination." The "factual" side of the study of international trade has already said much which would be relevant to an inquiry into product differentiation and price discrimination in the forms which they take in international trade. In this connection, too, it becomes impossible to generalize concerning the "restrictive" characteristics ordinarily associated with monopoly wherever it appears. Price discrimination under the conditions peculiar to international trade may result in an actual increase rather than a curtailment of aggregate production.

8. Consideration of the trade policy to which a theory of international trade under conditions of imperfect competition might lead brings us to some conclusions concerning the doctrine of comparative costs and the presumption in favor of free trade.

The presumption in favor of free trade disappears when free trade

fails to guarantee an optimum allocation of resources or some approximation to it. Under certain defined conditions of imperfect competition, the presumption is in favor of interventionism. The particular type of interventionism which seems appropriate to a system operating under conditions of imperfect competition and engaging in international trade is that of a tariff (or any other protective device) which secures that firms (or "sources of supply") shall be the optimum size. And this "optimum tariff" must be regarded as part of a broader system of planning ideally applicable to a system with rigorously defined characteristics, including, it should be noted, a definition of the degree of rationality, knowledge, and power possessed by the planning authority itself.

Of course, if such an authority existed under our assumed conditions, prescription would be unnecessary. This is only another way of saying that an economic theory devoid of any ethical coloring has properly nothing to say about policy. Any prescription, whether of non-interference or interventionism, forces a departure from the mechanistic terms by adherence to which alone ethical colorlessness can be maintained. However, the fact that we are bound to favor one policy or the other, or even in a genial attempt at compromise to favor a "middle way," indicates the necessity of removing some of our shortcomings by carrying our *philosophical* inquiries to a point where we may attain some competence in dealing with the essentially ethical considerations which must surround our choice. For these cannot be disregarded if our choice is to be worthy of even that degree of knowledge on these matters which already exists beyond the strict bounds of neo-classical economics.

VITA

Donald Bailey Marsh was born at Central Blissville, New Brunswick, Canada, on November 13, 1911. He graduated from the Fredericton High School and Provincial Normal School, and taught two years at Devon, N. B., before entering the University of New Brunswick. He received the degree of Bachelor of Arts from that institution in May, 1935, with first class honours in philosophy and economics. He received the degree of Master of Arts from Louisiana State University in June, 1936, with a major in economics and a minor in government. In September, 1936, he came to the University of Illinois with the rank of assistant in economics, and began preparation for the doctorate. During the academic year 1937-38, he taught economics and politics at the University of New Brunswick in place of Professor Burton Keirstead, who was on a year's leave of absence. Since September, 1938, the writer of this thesis has attended the University of Illinois, and has held during that time a fellowship in economics.